WE CLAIM:

1. A filter structure for filtering air in a gas turbine intake system, the turbine operating at a temperature of about 140°F to 350°F, the intake air having an ambient temperature and a humidity of at least 50% RH, the structure comprising, in an air intake of a gas turbine system, at least one filter element, the filter element having a media pack forming a tubular construction and construction defining a open filter interior; the open filter interior being a clean air plenum, the media pack including a pleated construction of a media composite, the media composite including a substrate at least partially covered by a layer of fine fibers, the fine fibers comprising a polymeric composition comprising an addition polymer or a condensation polymer other than a copolymer formed from a cyclic lactam and a C_{6-10} diamine monomer or a C_{6-10} diacid monomer combined with an additive material.

2. The structure of claim 1 wherein the substrate comprises a cellulosic fiber, a synthetic fiber or mixtures thereof.

3. The structure of claim 1 wherein the additive comprises an oligomer having a molecular weight of about 500 to 3000 and an aromatic character free of an alkyl moiety wherein the additive is miscible in the condensation polymer; and comprising the step of directing the air through the media pack of the filter element and into the open filter interior to clean the air.

4. The structure of claim 1 wherein the polymer comprises a polyalkylene terephthalate.

5. The structure of claim 1 wherein the polymer comprises a polyalkylene naphthalate.

6. The structure of claim 1 wherein the polymer comprises a polyethylene terephthalate.

7. The structure of claim 1 wherein the polymer comprises a nylon polymer.

8. The structure of claim 7 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer differing in molecular weight or monomer.

9. The structure of claim 8 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer comprising an alkoxy alkyl modified polyamide.

10. The structure of claim 8 wherein the second nylon polymer comprises a nylon copolymer.

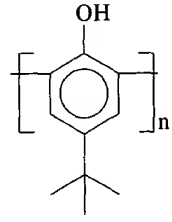
11. The structure of claim 8 wherein the polymers are treated to form a single polymeric composition as measured by a differential scanning calorimeter showing a single-phase material.

12. The structure of claim 11 wherein the copolymer and the second polymer are heat-treated.

13. The structure of claim 12 wherein the copolymer and the second polymer are heat-treated to a temperature less than the lower melting point of the polymers.

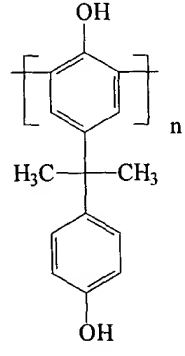
14. The structure of claim 1 wherein the additive comprises an oligomer comprising tertiary butyl phenol.

15. The structure of claim 14 wherein the additive comprises an oligomer comprising:



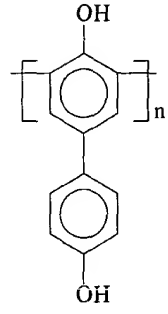
16. The structure of claim 1 wherein the resin comprises an oligomer comprising bis-phenol A.

17. The structure of claim 16 wherein the additive comprises an oligomer comprising:



18. The structure of claim 1 wherein the additive comprises an oligomer comprising dihydroxy biphenyl.

19. The structure of claim 18 wherein the additive comprises an oligomer comprising:



20. The structure of claim 1 wherein the additive comprises a blend of the resinous additive and a fluoropolymer.

21. The structure of claim 1 wherein the additive comprises a fluorocarbon surfactant.

22. The structure of claim 1 wherein the additive comprises a nonionic surfactant.

23. The structure of claim 1 wherein the condensation polymer comprises a polyurethane polymer.

24. The structure of claim 1 wherein the condensation polymer comprises a blend of a polyurethane polymer and a polyamide polymer.

25. The structure of claim 24 wherein the polyamide polymer comprises a nylon.

26. The structure of claim 25 wherein the nylon comprises a nylon homopolymer, a nylon copolymer or mixtures thereof.

27. The structure of claim 1 wherein the condensation polymer comprises an aromatic polyamide.

28. The structure of claim 1 wherein the condensation polymer comprises a reaction product of a diamine monomer and poly(m-phenylene isophthalamide).

29. The structure of claim 28 wherein the polyamide comprises a reaction product of a diamine and a poly(p-phenylene terephthalamide).

30. The structure of claim 1 wherein the condensation polymer comprises a polybenzimidazole.

31. The structure of claim 1 wherein the condensation polymer comprises a polyarylate.

32. The structure of claim 31 wherein the polyarylate polymer comprises a condensation polymerization reaction product between bis-phenol-A and mixed phthalic acids.

33. A method for filtering air in a gas turbine intake system, the turbine operating at a temperature of about 140°F to 350°F, the intake air having an ambient temperature and a humidity of at least 50% RH, the method comprising the steps of:

(a) installing a filter proximate an air intake of a gas turbine system, the filter comprising at least one filter element, the filter element having a media pack forming a tubular construction and construction defining a open filter interior; the open filter interior being a clean air plenum, the media pack including a pleated construction of a media composite, the media composite including a substrate at least partially covered by a layer of fine fibers, the fine fibers comprising a

polymeric composition comprising an addition polymer or a condensation polymer other than a copolymer formed from a cyclic lactam and a C_{6-10} diamine monomer or a C_{6-10} diacid monomer combined with an additive material; and

(b) directing intake air into an air intake of a gas turbine system

34. The method of claim 33 wherein the additive comprises an oligomer having a molecular weight of about 500 to 3000 and an aromatic character free of an alkyl phenolic moiety wherein the additive is miscible in the condensation polymer; and comprising the step of directing the air through the media pack of the filter element and into the open filter interior to clean the air.

35. The composition of claim 33 wherein the polymer comprises a polyalkylene terephthalate.

36. The composition of claim 33 wherein the polymer comprises a polyalkylene naphthalate.

37. The composition of claim 33 wherein the polymer comprises a polyethylene terephthalate.

38. The composition of claim 33 wherein the polymer comprises a nylon polymer.

39. The composition of claim 33 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer differing in molecular weight or monomer composition.

40. The composition of claim 33 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer comprising an alkoxy alkyl modified polyamide.

41. The composition of claim 39 wherein the second nylon polymer comprises a nylon copolymer.

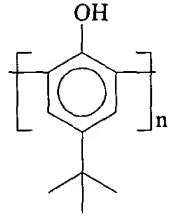
42. The composition of claim 39 wherein the polymers are treated to form a single polymeric composition as measured by a differential scanning calorimeter showing a single-phase material.

43. The composition of claim 42 wherein the copolymer and the second polymer are heat-treated.

44. The composition of claim 43 wherein the copolymer and the second polymer are heat-treated to a temperature less than the lower melting point of the polymers.

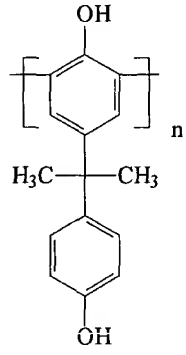
45. The composition of claim 1 wherein the additive comprises an oligomer comprising tertiary butyl phenol.

46. The composition of claim 45 wherein the additive comprises an oligomer comprising:



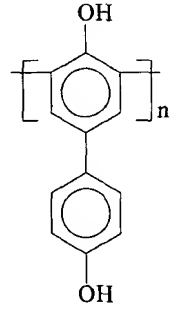
47. The composition of claim 33 wherein the resin comprises an oligomer comprising bis-phenol A.

48. The composition of claim 47 wherein the additive comprises an oligomer comprising:



49. The composition of claim 33 wherein the resin comprises an oligomer comprising dihydroxy biphenyl.

50. The composition of claim 49 wherein the additive comprises an oligomer comprising:



51. The composition of claim 33 wherein the additive comprises a blend of the resinous additive and a fluoropolymer.

52. The composition of claim 33 wherein the additive comprises a fluorocarbon surfactant.

53. The composition of claim 33 wherein the additive comprises a nonionic surfactant.

54. The composition of claim 33 wherein the condensation polymer comprises a polyurethane polymer.

55. The composition of claim 33 wherein the condensation polymer comprises a blend of a polyurethane polymer and a polyamide polymer.

56. The composition of claim 55 wherein the polyamide polymer comprises a nylon.

57. The composition of claim 56 wherein the nylon comprises a nylon homopolymer, a nylon copolymer or mixtures thereof.

58. The composition of claim 33 wherein the condensation polymer comprises an aromatic polyamide.

59. The composition of claim 33 wherein the condensation polymer comprises a reaction product of a diamine monomer and poly(m-phenylene isophthalamide).

60. The composition of claim 58 wherein the polyamide comprises a reaction product of a diamine and a poly(p-phenylene terephthalamide).

61. The composition of claim 33 wherein the condensation polymer comprises a polybenzimidazole.

62. The composition of claim 33 wherein the condensation polymer comprises a polyarylate.

63. The composition of claim 29 wherein the polyarylate polymer comprises a condensation polymerization reaction product between bis-phenol-A and mixed phthalic acids.

64. The method according to claim 33 wherein, said step of directing air into an air intake of a gas turbine system having at least one filter element includes directing air into an air intake of a gas turbine system having a plurality of filter element pairs, each of the filter element pairs including a first tubular filter element with the media pack sealed against an end of a second tubular filter element with the media pack; each of the first and second tubular filter elements defining the clean air plenum.

65. A method according to claim 33 wherein said step of directing air into an air intake of a gas turbine system having a plurality of filter element pairs includes directing air into the first tubular filter element and the second tubular filter element; wherein the first tubular filter element is cylindrical and the second tubular filter element is conical.

66. A method according to claim 33 further including directing a pulse of air into each of the clean air plenums of each of the filter element pairs to at least partially remove particulates collected on each of the media packs.

67. A method for filtering air in a gas turbine intake system, the method comprising, in a turbine operating at a temperature of about 140°F to 350°F, an intake air having an ambient temperature and a humidity of at least 50% RH,

(a) directing intake air into an air intake of a gas turbine system having at least one filter element, the filter element having a media pack forming a tubular construction and construction defining a open filter interior; the open filter interior being a clean air plenum, the media pack including a pleated construction

of a media composite, the media composite including a substrate at least partially covered by a layer of fine fibers, the fine fibers comprising a condensation polymer, other than a copolymer formed from a cyclic lactam and a C_{6-10} diamine monomer or a C_{6-10} diacid monomer, and a resinous additive comprising an oligomer having a molecular weight of about 500 to 3000 and an aromatic character wherein the additive miscible in the condensation polymer; and

(b) directing the air through the media pack of the filter element and into the open filter interior to clean the air.

68. The composition of claim 67 wherein the condensation polymer comprises a polyalkylene terephthalate.

69. The composition of claim 67 wherein the condensation polymer comprises a polyalkylene naphthalate.

70. The composition of claim 67 wherein the condensation polymer comprises a polyethylene terephthalate.

71. The composition of claim 67 wherein the condensation polymer comprises a nylon polymer comprising a homopolymer having repeating units derived from a cyclic lactam.

72. The composition of claim 67 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer differing in molecular weight or monomer composition.

73. The composition of claim 67 wherein the nylon copolymer is combined with a second nylon polymer, the second nylon polymer comprising an alkoxy alkyl modified polyamide.

74. The composition of claim 73 wherein the second nylon polymer comprises a nylon copolymer.

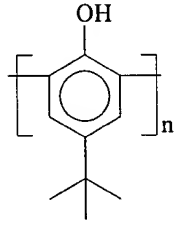
75. The composition of claim 73 wherein the polymers are treated to form a single polymeric composition as measured by a differential scanning calorimeter showing a single phase material.

76. The composition of claim 74 wherein the copolymer and the second polymer are heat treated.

77. The composition of claim 74 wherein the copolymer and the second polymer are heat treated to a temperature less than the lower melting point of the polymers.

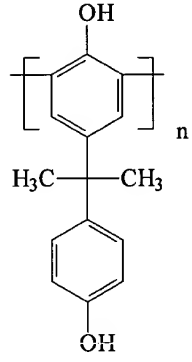
78. The composition of claim 67 wherein the additive comprises an oligomer comprising tertiary butyl phenol.

79. The composition of claim 78 wherein the additive comprises an oligomer comprising:



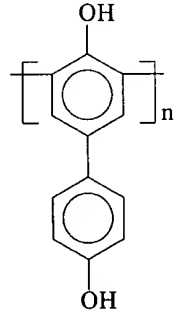
80. The composition of claim 67 wherein the resin comprises an oligomer comprising bis-phenol A.

81. The composition of claim 80 wherein the additive comprises an oligomer comprising:



82. The composition of claim 67 wherein the resin comprises an oligomer comprising dihydroxy biphenyl.

83. The composition of claim 82 wherein the additive comprises an oligomer comprising:



84. The composition of claim 67 wherein the additive comprises a blend of the resinous additive and a fluoropolymer.

85. The composition of claim 67 wherein the additive comprises a fluorocarbon surfactant.

86. The composition of claim 67 wherein the additive comprises a nonionic surfactant.

87. The composition of claim 67 wherein the condensation polymer comprises a polyurethane polymer.

88. The composition of claim 67 wherein the condensation polymer comprises a blend of a polyurethane polymer and a polyamide polymer.

89. The composition of claim 88 wherein the polyamide polymer comprises a nylon.

90. The composition of claim 89 wherein the nylon comprises a nylon homopolymer, a nylon copolymer or mixtures thereof.

91. The composition of claim 67 wherein the condensation polymer comprises an aromatic polyamide.

92. The composition of claim 67 wherein the condensation polymer comprises a reaction product of a diamine monomer and poly(m-phenylene isophthalamide).

93. The composition of claim 92 wherein the polyamide comprises a reaction product of a diamine and a poly(p-phenylene terephthalamide).

94. The composition of claim 67 wherein the condensation polymer comprises a polybenzimidazole.

95. The composition of claim 67 wherein the condensation polymer comprises a polyarylate.

96. The composition of claim 29 wherein the polyarylate polymer comprises a condensation polymerization reaction product between bis-phenol-A and mixed phthalic acids.

97. The method according to claim 67 wherein, said step of directing air into an air intake of a gas turbine system having at least one filter element includes directing air into an air intake of a gas turbine system having a plurality of filter element pairs, each of the filter element pairs including a first tubular filter element with the media pack sealed against an end of a second tubular filter element with the media pack; each of the first and second tubular filter elements defining the clean air plenum.

98. A method according to claim 67 wherein said step of directing air into an air intake of a gas turbine system having a plurality of filter element pairs includes directing air into the first tubular filter element and the second tubular filter element; wherein the first tubular filter element is cylindrical and the second tubular filter element is conical.

99. A method according to claim 67 further including directing a pulse of air into each of the clean air plenums of each of the filter element pairs to at least partially remove particulates collected on each of the media packs.